

REMARKS

The application includes claims 2-8, 10-13, and 20-30 prior to entering this amendment.

The examiner withdraws the allowability of claim 2 and 10.

The examiner objects to the abstract because it exceeds 150 words.

The examiner objects to the drawings under 37 CFR 1.83(a) as failing to show every feature of the invention specified in the claims.

The examiner objects to claims 2-8 and 27-30 for informalities.

The examiner finds claims 3-8, 11-13, 23-25 and 28-29 allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The applicant notes that claims 23-25 and 28-29 were also rejected, and assumes that the rejection overrides the allowability.

The examiner rejects claims 20, 26, and 28-30 under 35 U.S.C. § 102(e) as being anticipated by Birkett, et al. (U.S. Patent No. 6,977,976).

The examiner rejects claims 2, 10 and 22-25 under 35 U.S.C. § 103(a) as being unpatentable over Birkett in view of Mohindra (U.S. Patent No. 7,110,734).

The examiner rejects claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Birkett in view of Sanders, et al. (U.S. Patent No. 6,754,487).

The examiner rejects claim 20 under 35 U.S.C. § 103(a) as being unpatentable over Constantinidis, et al. (U.S. Patent No. 6,792,254) in view of Dilling, et al. (U.S. Patent No. 6,163,685).

The examiner rejects claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Constantinidis in view of Dilling and Kingsbury, et al. (U.S. Patent No. 6,308,155).

The examiner rejects claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Constantinidis in view of Dilling and Sanders.

The examiner rejects claim 22 under 35 U.S.C. § 103(a) as being unpatentable over Constantinidis in view of Dilling and Mohindra.

The examiner rejects claim 27 under 35 U.S.C. § 103(a) as being unpatentable over Constantinidis in view of Dilling, Kingsbury, and Mohindra.

The applicant amends the specification.

The applicant amends independent claims 2, 10, 20, and 26, and amends dependent claims 4-8, 12-13, 21-25, and 27-30, to more clearly point out and distinctly claim what the applicant regards as the invention of these claims, and not for any other reason.

The applicant incorporates the limitations of claim 3 into claim 2, incorporates the limitations of claim 11 into claim 10, and cancels claims 3 and 11, without prejudice.

The applicant adds new dependent claims 31-33.

The application remains with claims 2, 4-8, 10, 12-13, and 20-33 after entering this amendment.

The applicant adds no new matter and request reconsideration in view of the following remarks. The applicant points out that the claimed subject matter may be patentably distinguished from the cited reference(s) for multiple reasons; however, the following remarks are believed to be sufficient. Likewise, it is noted that the applicant's failure to comment directly upon any of the positions asserted by the Examiner in the office action does not indicate agreement or acquiescence with those asserted positions.

Specification Objections

The examiner objects to the specification for informalities, specifically indicating that "it exceeds 150 words"¹. The applicant here shortens the abstract to obviate the examiner's objection.

Drawing Objections

The examiner objects to the drawings as failing to show every feature of the invention specified in the claims. The examiner notes that with "respect to claims 20 and 26 Therefore, the 'detector to generate a detect signal by detecting a difference between the I and Q signals' of claims 20 and 26 must be shown or the feature(s) canceled from the claim(s)."²

¹ Office Action, page 2.

² Office Action, page 2.

The applicant thanks the examiner for making the objection. Claims 20 and 26 did not use language similar to the specification and others of the claims with respect to the “difference”, such as in claim 2 which recites (emphasis added):

adjusting with the associated control signal the respective I and Q VGAs for differences between the detected I and Q signal and a reference signal;

The applicant amends claims 20 and 26, at least in part, to remove the drawing objection.

Claim Objections

The examiner objects to claims 2-8 and 27-30 for informalities. The examiner notes that claim 2 “recites: “i. detecting respective I and Q output signals received from respective I and Q variable gain amplifiers (VGAs) associated with said specified AGC stage;” and then steps ii., iii., iv., and v. It should be clarified in claim 2, that the detecting step comprises steps ii. through v.”³ The applicant amends claims 2, at least in part, to clarify that the detecting step comprises the steps indicated by the examiner. The applicant uses indentation, rather than roman numerals, to indicate the relationships of the steps.

The applicant thanks the examiner for pointing out the dependent claim numbering in claims 27-30, and amends these claims to, at least in part, remove this objection.

Allowable Subject Matter

The applicant thanks Examiner Vlahos for finding claims 3-8, and 11-13 allowable if rewritten in independent form. The applicant incorporates all the limitations of claim 3 into claim 2, and incorporates all of the limitations of claim 11 into claim 10, to more clearly indicate the amended versions of claims 3 and 11. The applicant points out that claims 2 and 10 have also been amended to more clearly point out and distinctly claim what the applicant regards as the inventions of these claims. The applicant believes that the amendments to claims 2 and 10 have not changed their allowability, or the allowability of their respective dependent claims 4-8 and 12-13.

³ Office Action, page 3.

AMENDMENT

Claim Rejections Under § 102

The examiner rejects claims 20, 26, and 28-30 as being anticipated by Birkett. The applicant traverses this rejection for the reasons that follow.

Claim 20 recites:

A wireless receiver including a plurality of serially connected automatic gain control stages, each stage comprising:

...

an analog to digital converter (ADC) to convert the detect signal to a digital detect signal;

...

where the ADC is enabled to

compare the detect signal to the reference signal, and

generate digital up/down and count/hold control signals as the digital detect signal;

Claim 26 recites:

A method comprising:

...

at each of the stages, converting the respective detect signal to a respective digital detect signal;

where the converting comprises comparing the respective detect signal to a respective reference signal via a multi-level comparator and a logic circuit.

The applicant incorporates into claim 20 the limitations from dependent claim 3, which was deemed allowable by the examiner. The applicant believes that claim 20 is distinguished over the cited references for the same reason that claim 3 is distinguished – none of the cited references teach or suggest an ADC in each of a plurality of serially connected automatic gain control stages, “where the ADC is enabled to compare the detect signal to the reference signal, and generate digital up/down and count/hold control signals as the digital detect signal.”

The applicant incorporates into claim 26 the limitations from dependent claim 11, which was deemed allowable by the examiner. The applicant believes that claim 26 is distinguished over the cited references for the same reason that claim 11 is distinguished – none of the cited

references teach or suggest at each of a plurality of serially connected automatic gain control stages, “converting the detect signal to a respective digital detect signal; where the converting comprises comparing the detect signal to a reference signal via a multi-level comparator and a logic circuit.”

Accordingly, the applicant believes independent claims 20, and 26 are both allowable.

As dependent claims 28-30 incorporate all of the limitations of independent claim 26, and as independent claim 26 is believed allowable, the applicant also traverses the rejections of dependent claims 28-30.

Claim Rejections Under § 103

The examiner rejects claims 2, 10 and 22-25 as being unpatentable over Birkett in view of Mohindra. The examiner rejects claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Birkett in view of Sanders. The examiner rejects claim 20 as being unpatentable over Constantinidis in view of Dilling. The examiner rejects claim 26 as being unpatentable over Constantinidis in view of Dilling and Kingsbury. The examiner rejects claim 21 as being unpatentable over Constantinidis in view of Dilling and Sanders. The examiner rejects claim 22 as being unpatentable over Constantinidis in view of Dilling and Mohindra. The examiner rejects claim 27 as being unpatentable over Constantinidis in view of Dilling, Kingsbury, and Mohindra. The applicant traverses these rejections for the reasons that follow.

The rejection of claim 2 is obviated as claim 2 now incorporates all of the limitations of claim 3 (now canceled) which was allowed, and accordingly claim 2 is allowable for the same reasons as the examiner found claim 3 to be allowable.

The rejection of claim 10 is obviated as claim 10 now incorporates all of the limitations of claim 11 (now canceled) which was allowed, and accordingly claim 10 is allowable for the same reasons as the examiner found claim 11 to be allowable.

Regarding the rejections of claims 20 and 26, as per the remarks above for the rejection under 35 U.S.C. § 102(e), claim 20 is now allowable for the same reason that claim 3 is allowable, and claim 26 is now allowable for the same reason that claim 11 is allowable.

Accordingly, independent claims 2, 10, 20, and 26 are all allowable.

As dependent claims 21-25, and 27 incorporate all of the limitations of their respective independent claim, and as the independent claims are allowable, the applicant also traverses the rejections of dependent claims 21-25, and 27.

Remarks Regarding New Claims

All of the new claims are dependent claims. As dependent claim 31 incorporates all of the limitations of independent claim 20, and as dependent claims 32-33 incorporate all of the limitations of independent claim 26, the applicant believes that these claims also traverse the rejections and are allowable for the same reasons as their respective independent claim.

Conclusion

For the above reasons, the applicant requests reconsideration and allowance of the remaining claims. The applicant encourages the examiner to telephone the undersigned at (503) 224-2170 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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